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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/679,333	10/04/2000	Stefan Hepper	DE919990073US1	6558
46369	7590	11/28/2005	EXAMINER	
HESLIN ROTHENBERG FARLEY & MESITI P.C.			LANIER, BENJAMIN E	
5 COLUMBIA CIRCLE			ART UNIT	
ALBANY, NY 12203			PAPER NUMBER	

2132

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/679,333

Applicant(s)

HEPPER ET AL.

Examiner

Benjamin E Lanier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed 27 October 2005 amends claims 1, 17, and 20. Applicant's amendment has been fully considered and is entered.

Response to Arguments

2. Applicant's arguments filed 27 October 2005 have been fully considered but they are not persuasive. Applicant's amended claim limitation "wherein transmission of the signed, bundled command sequence as the data packet reduces data transfers between the server and the client" will not be given patentable weight because the language suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure and therefore does not limit the scope of the claim.

3. Applicant's argument that Peyret does not disclose bundling in the server a sequence of commands for downloading of the application component to the smart card is not persuasive because Peyret discloses that the smart card receives applets from the server and that these applets can be used to download new versions of the applets (Col. 8, lines 27-37). The applets of Peyret would meet the limitation of a bundle of commands.

4. Applicant's argument that combination of Peyret and Chen is in error because a smart card and a memory card are not equivalent structures is not persuasive because Applicant's merely making a conclusory statement and has not provided evidence to rebut the prima face case of obviousness. Applicant's rebuttal has not provided evidence of unexpected results, which appear to be the basis of the arguments. Smart cards and memory cards are both storage mediums, and Applicant has not provided evidence to suggest that performing the installation

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process of Chen in a smart card, as opposed to a memory card, would provide any different results.

5. Applicant's argument that the unpacking of data in Chen is different than the claimed unpacking is not persuasive because the claim language does not distinguish itself from the unpacking of Chen.

6. Applicant's argument that the combination of Chen and Peyret is deficient because there is a difference between a portable computer and a smart card, in that a smart card has no display, is not persuasive because smart cards are used within a computing device, and the computing device would have an interface.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1, 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 1 recites the limitation "the data packet" in line 14. There is insufficient antecedent basis for this limitation in the claim.

10. Claim 1 recites the limitation "the command sequence" in 11. There is insufficient antecedent basis for this limitation in the claim.

11. Claim 3 recites the limitation "the transmitted keys" in line 9. There is insufficient antecedent basis for this limitation in the claim. The claims require the transmission of a secret

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key, but do not require the transmission of a second key. Therefore, it is unclear what keys make up the transmitted keys.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claims 1, 4, 6, 8, 11-15, 17, 18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peyret, U.S. Patent No. 5,923,884, in view of Chen, U.S. Patent No. 6,360,364, and further in view of Zumkehr, U.S. Patent No. 5,974,529. Referring to claims 1, 4, 6, 12-15, 17, Peyret discloses a method for loading applications onto a smart card wherein the system includes a smart card, terminal (client), and a server (Fig. 4). The smart card has a first interface system that may connect the smart card to the terminal and second interface to connect the terminal to the server (Fig. 4 & Col. 7, lines 33-39). When the smart card is connected to the terminal, the processor of the smart card, verifies the authenticity of the terminal and of the server and visa versa. If the server and the smart card authenticate each other, then the loader

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within the smart card begins the loading process (Col. 7, lines 42-67). Once an application is selected to be loaded the smart card authenticates the application code through the use of digital signatures (Col. 9, lines 50-53), which meets the limitation of sending a request from the client to the server for a smart card application component. Peyret discloses that the smart card receives applets from the server and that these applets can be used to download new versions of the applets (Col. 8, lines 27-37), which meets the limitation of bundling in the server a sequence of commands for downloading of the application component to the smart card. Digital signatures utilize private or secret keys, which meet the limitation of delivery of a secret key or session key by the server, generation of a digital signature with the secret key or session key by way of each command within the command sequence, transmission of the signed command sequence as a data packet to the client. If the digital signature is valid then the application is loaded onto the smart card (Col. 9, lines 54-57), which meets the limitation of checking of the digital signature and execution of the commands on the smart card and execution of the commands on the smart card if the digital signature is correct. Peyret does not disclose that the application is unpacked at the user terminal before being installed on the smart card. Chen discloses a method for installing an application wherein a desktop manager on the user terminal unpacks the application program before installing the program on the memory card (Col. 8, line 66 – Col. 9, line 22), which meets the limitation of unpacking of the data packet by the client and transmission of the individual commands in sequence to the smart card. It would have been obvious to one of ordinary skill in the art at the time the invention was made to unpack the application program of Peyret on the user terminal before transferring the application to the smart card in order to minimize the decisions required of a user when installing an application as taught in Chen (Col. 9, lines 24-

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26). Peyret does not disclose that each individual instruction of the application is digital signed. Zumkehr discloses a system for error detection wherein individual program instructions are digitally signed and later authenticated (Col. 2, lines 29-47). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the application instructions of Peyret to be digitally signed in order to provide low detection latency as taught in Zumkehr (Col. 2, lines 47-50). Applicant's amended claim limitation "wherein transmission of the signed, bundled command sequence as the data packet reduces data transfers between the server and the client" will not be given patentable weight because the language suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure and therefore does not limit the scope of the claim.

Referring to claim 8, Peyret discloses that the cryptosystem used can be a public key cryptosystem (asymmetrical) (Col. 5, lines 31-33).

Referring to claim 11, APDU protocol is the protocol used to communication with a smart card, which meets the limitation of the command sequence as a minimum comprises an Install command, one or more Load commands and a final Install command, and is stored in an APDU structure.

15. Claims 2, 7, 10, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peyret, U.S. Patent No. 5,923,884, in view of Chen, U.S. Patent No. 6,360,364, and further in view of Zumkehr, U.S. Patent No. 5,974,529 as applied to claims 1-3, 17 above, and further in view of Everett, U.S. Patent No. 6,575,372. Referring to claims 2, 7, 10, 19, Peyret discloses a method for loading applications onto a smart card wherein the system includes a smart card, terminal (client), and a server (Fig. 4). The smart card has a first interface system that may

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connect the smart card to the terminal and second interface to connect the terminal to the server (Fig. 4 & Col. 7, lines 33-39). When the smart card is connected to the terminal, the processor of the smart card, verifies the authenticity of the terminal and of the server and visa versa. If the server and the smart card authenticate each other, then the loader within the smart card begins the loading process (Col. 7, lines 42-67). Once an application is selected, which meets the limitation of loading a sequence of commands to download the application component to the chipcard, to be loaded the smart card authenticates the application code through the use of digital signatures (Col. 9, lines 50-53). Digital signatures utilize private or secret keys, which meet the limitation of delivery of a secret key or session key by the server, generation of a digital signature with the secret key or session key by way of each command within the command sequence, transmission of the signed command sequence as a data packet to the client. If the digital signature is valid then the application is loaded onto the smart card (Col. 9, lines 54-57), which meets the limitation of checking of the digital signature and execution of the commands if the digital signature is correct. Chen discloses a method for installing an application wherein a desktop manager on the user terminal unpacks the application program before installing the program on the memory card (Col. 8, line 66 – Col. 9, line 22), which meets the limitation of unpacking of the data packet by the client and transmission of the individual commands in sequence to the smart card. Zumkehr discloses a system for error detection wherein individual program instructions are digitally signed and later authenticated (Col. 2, lines 29-47). Peyret does not disclose that the keys are generated based on card identification data. Everett discloses an IC card loading system wherein to generate cryptographic keys for each individual IC card, a certificate authority uses card identification information transmitted from the terminal in order to

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generate individual key sets for the IC cards (Col. 5, lines 42-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the cryptographic keys of Peyret to be generated based on the IC card identification data in order to easily identify and authenticate the cards at a later point in time as taught in Everett (Col. 8, lines 25-34).

16. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peyret, U.S. Patent No. 5,923,884, in view of Chen, U.S. Patent No. 6,360,364, and further in view of Zumkehr, U.S. Patent No. 5,974,529 as applied to claims 1, 13 above, and further in view of Hanel, GB 2,314,948. Referring to claim 16, Peyret discloses a method for loading applications onto a smart card wherein the system includes a smart card, terminal (client), and a server (Fig. 4). The smart card has a first interface system that may connect the smart card to the terminal and second interface to connect the terminal to the server (Fig. 4 & Col. 7, lines 33-39). When the smart card is connected to the terminal, the processor of the smart card, verifies the authenticity of the terminal and of the server and visa versa. If the server and the smart card authenticate each other, then the loader within the smart card begins the loading process (Col. 7, lines 42-67). Once an application is selected, which meets the limitation of loading a sequence of commands to download the application component to the chipcard, to be loaded the smart card authenticates the application code through the use of digital signatures (Col. 9, lines 50-53). Digital signatures utilize private or secret keys, which meet the limitation of delivery of a secret key or session key by the server, generation of a digital signature with the secret key or session key by way of each command within the command sequence, transmission of the signed command sequence as a data packet to the client. If the digital signature is valid then the application is loaded onto the smart card (Col. 9, lines 54-57), which meets the limitation of

checking of the digital signature and execution of the commands if the digital signature is correct. Chen discloses a method for installing an application wherein a desktop manager on the user terminal unpacks the application program before installing the program on the memory card (Col. 8, line 66 – Col. 9, line 22), which meets the limitation of unpacking of the data packet by the client and transmission of the individual commands in sequence to the smart card. Zumkehr discloses a system for error detection wherein individual program instructions are digitally signed and later authenticated (Col. 2, lines 29-47). Peyret does not disclose using message authentication codes in the command codes. Hanel discloses a chipcard data transfer method wherein message authentication codes are appended to commands (Page 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the commands of Peyret to include a MAC because it is a known procedure as disclosed in Hanel (Page 1).

17. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peyret, U.S. Patent No. 5,923,884, in view of Chen, U.S. Patent No. 6,360,364, and further in view of Zumkehr, U.S. Patent No. 5,974,529 as applied to claim 1 above, and further in view of Klingman, U.S. Patent No. 5,729,594. Referring to claim 5, Peyret discloses a method for loading applications onto a smart card wherein the system includes a smart card, terminal (client), and a server (Fig. 4). The smart card has a first interface system that may connect the smart card to the terminal and second interface to connect the terminal to the server (Fig. 4 & Col. 7, lines 33-39). When the smart card is connected to the terminal, the processor of the smart card, verifies the authenticity of the terminal and of the server and visa versa. If the server and the smart card authenticate each other, then the loader within the smart card begins the loading process (Col. 7, lines 42-67). Once an application is selected, which meets the limitation of loading a sequence of

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commands to download the application component to the chipcard, to be loaded the smart card authenticates the application code through the use of digital signatures (Col. 9, lines 50-53).

Digital signatures utilize private or secret keys, which meet the limitation of delivery of a secret key or session key by the server, generation of a digital signature with the secret key or session key by way of each command within the command sequence, transmission of the signed command sequence as a data packet to the client. If the digital signature is valid then the application is loaded onto the smart card (Col. 9, lines 54-57), which meets the limitation of checking of the digital signature and execution of the commands if the digital signature is correct. Chen discloses a method for installing an application wherein a desktop manager on the user terminal unpacks the application program before installing the program on the memory card (Col. 8, line 66 – Col. 9, line 22), which meets the limitation of unpacking of the data packet by the client and transmission of the individual commands in sequence to the smart card. Zumkehr discloses a system for error detection wherein individual program instructions are digitally signed and later authenticated (Col. 2, lines 29-47). Peyret does not disclose communication using SSL. Klingman discloses client server communications using SSL (Col. 3, lines 32-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use SSL in the communications of Peyret in order to provide a secure communication line as taught in Klingman (Col. 3, lines 37-39).

18. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peyret, U.S. Patent No. 5,923,884, in view of Chen, U.S. Patent No. 6,360,364, and further in view of Zumkehr, U.S. Patent No. 5,974,529 as applied to claims 1, 8 above, and further in view of Schneier. Referring to claim 9, Peyret discloses a method for loading applications onto a smart card

wherein the system includes a smart card, terminal (client), and a server (Fig. 4). The smart card has a first interface system that may connect the smart card to the terminal and second interface to connect the terminal to the server (Fig. 4 & Col. 7, lines 33-39). When the smart card is connected to the terminal, the processor of the smart card, verifies the authenticity of the terminal and of the server and visa versa. If the server and the smart card authenticate each other, then the loader within the smart card begins the loading process (Col. 7, lines 42-67). Once an application is selected, which meets the limitation of loading a sequence of commands to download the application component to the chipcard, to be loaded the smart card authenticates the application code through the use of digital signatures (Col. 9, lines 50-53). Digital signatures utilize private or secret keys, which meet the limitation of delivery of a secret key or session key by the server, generation of a digital signature with the secret key or session key by way of each command within the command sequence, transmission of the signed command sequence as a data packet to the client. If the digital signature is valid then the application is loaded onto the smart card (Col. 9, lines 54-57), which meets the limitation of checking of the digital signature and execution of the commands if the digital signature is correct. Chen discloses a method for installing an application wherein a desktop manager on the user terminal unpacks the application program before installing the program on the memory card (Col. 8, line 66 – Col. 9, line 22), which meets the limitation of unpacking of the data packet by the client and transmission of the individual commands in sequence to the smart card. Zumkehr discloses a system for error detection wherein individual program instructions are digitally signed and later authenticated (Col. 2, lines 29-47). Peyret discloses the use of pubic key cryptography but does not disclose the use of RSA. Schneier discloses that RSA is a form of public key cryptography (Page 366). It

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would have been obvious to one of ordinary skill in the art at the time the invention was made to use RSA as the public key cryptographic method in Peyret because RSA is the most popular form of public key cryptography as disclosed in Schneier (Page 366-367).

Conclusion

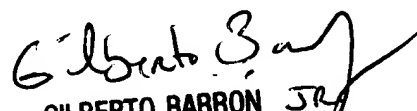
19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin E. Lanier whose telephone number is 571-272-3805. The examiner can normally be reached on M-Th 7:30am-5:00pm, F 7:30am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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